

**96. *Poecilochaetus tropicus* n. sp., a Remarkable  
Sedentary Polychaete from the South Seas.<sup>1)</sup>**

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In the course of an investigation on the polychaetous annelids from the South Seas I met with a remarkable polychaete probably referable to the rare genus *Poecilochaetus*. As far as I am aware, only two species of the genus have hitherto been recorded from the circumboreal regions, and the present new species occurring in the tropical zone differs distinctly from them in several points. A brief description of the species will be given here, and a detailed account on this geographically isolated species will be afforded later. I would like to express my cordial thanks to Prof. Tohru Uchida for his kind supervision.

*Poecilochaetus tropicus* n. sp.

A single well-preserved specimen devoid of the posterior segments and composed of 39 setigerous segments measures 30 mm long. Prostomium small and oval, with a single median tentacle attached to the ventral region. Four small eyes, two dorsal and two ventral. The palps could not be detected; they may have been accidentally lost, as these organs are very deciduous in other species. Nuchal organ composed of three processes, of which the two lateral ones are quite rudimentary and remain as small rounded bodies, while the median one is greatly developed, the tip extended to the ninth segment. Anterior dorsal body surface smooth with a few tubercles near the parapodia. In the first eleven segments corresponding to the anterior region of *P. serpens*, the ventral body surface is trianulated. Parapodia on the first segment directed forwards, provided with slender, long, clavate ventral cirri and small rudimentary dorsal ones. Both noto- and neuropodial setae are simple, smooth and capillary, the former much longer than the latter. On the second setigerous segment

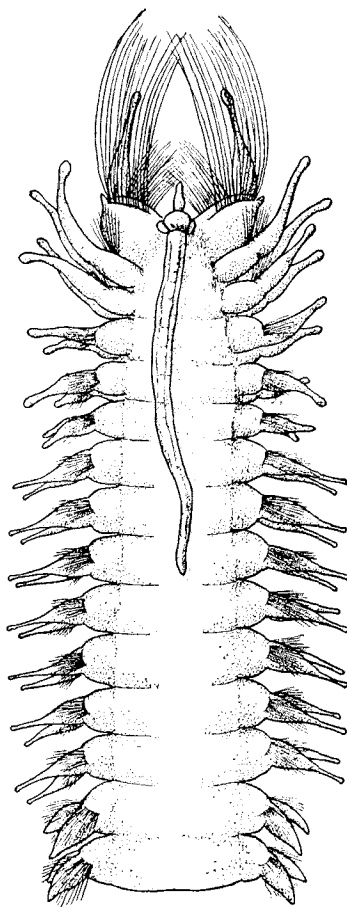


Fig. 1. *Poecilochaetus tropicus* n. sp. Anterior end, dorsal view.  $\times 10$ .

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parapodia are still directed forwards, and the dorsal cirri, unlike the foregoing, are well developed and longer than the ventral. The notopodial setae are of two kinds: slender, long, capillary ones, and spined bristles, while the neuropodial setae consist of three stout, slightly curved hooks and a few spined setae. No smooth, simple setae occur on the neuropodium of the second and third segments. On the third parapodia the dorsal and ventral cirri are similar in shape but smaller in size, the setae quite resembling those of the second segment. On the fourth segment the setae bundles contain three kinds of setae on both noto- and neuropodia; 1) spined setae similar to those of the third segment, 2) slender hair-like setae with finely serrated lateral border, 3) rather short, straight, smooth ones. No hooks occur on the neuropodium. The essential features of the setae from the fourth to the nineteenth segments are generally similar. The dorsal cirri on the fifth segment are longer than the ventral, but not so remarkable as in *P. serpens*. The parapodia of the sixth segment are similar to those of the fourth. The cirri from the seventh to the thirteenth segment in the present species are remarkably characteristic as in *P. serpens*.

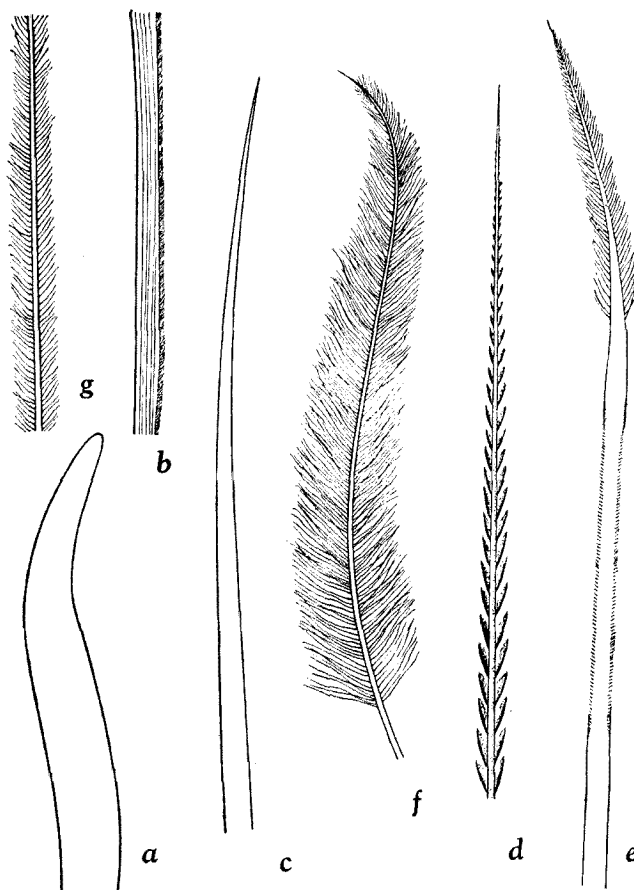


Fig. 2. *Poecilochaetus tropicus* n. sp.

*a*, hook from the 2nd neuropodium.  $\times 200$ ; *b*, finely serrated seta from the 8th segment.  $\times 540$ ; *c*, smooth seta from the 5th segment.  $\times 200$ ; *d*, spined bristle from the 3rd segment.  $\times 350$ ; *e*, seta with terminal brush; *f*, feathered seta from the 24th segment; *g*, feathered seta of another type from the 23rd segment. All  $\times 200$ .

Both the noto- and neuropodial cirri are slender and flask-shaped, the base of which is swollen, while the neck is slender with a slight enlargement at the distal portion. In the following six segments (segments XIV-XX) both dorsal and ventral cirri are larger, lanceolate in shape. From the twenty-first segment backwards the cirri are much reduced in size to finger-shaped processes. The gills begin to appear from the nineteenth segment as bifid club-shaped lobes separated from each other. On the twentieth segment, as well as on the twenty-first, the character of the setae differs somewhat from those of the following segments. Feathered bristles each bearing a slender, flexible stem with fine hairs first occur on the twentieth segment, and these bristles can always be found only on the ventral division of notopodium and dorsal portion of the neuropodium, the same feature being met with in the latter segments. A few slender serrated setae are found on the outer division of both noto- and neuropodia. In addition to them there are the setae minutely serrated at the middle portion of the stem, of which the distal part is sparsely provided with short hairs. The spined setae also occur on these segments as well as on the remaining ones. From the twenty-second to the last segment in the specimen the slender serrated setae are all replaced by setae having a fairly stiff shaft with short lateral hairs, which gradually become longer in the posterior segments. In these parapodia the flexible feathered setae of the inner division and the setae with terminal brush are also found, the hairs being more elongated and more crowded posteriorly. Lateral sensory organs found between the dorsal and ventral cirri are represented by distinct processes with sensory hairs on the anterior fifteen segments except four intermediate segments VI-IX, which lack the organ entirely. It is a very striking feature of the species. From the fifteenth segment backwards the organ gradually diminishes in size and remains as a small depression on the posterior segments. The occurrence of the stout hooks found on the posteriormost segments of *P. serpens* could not be ascertained in the present example destitute of the posterior body regions.

Collected on a sandy beach at Marukyoku, Palau Island in February, 1934.